

ARG42251 anti-CD209 / DC-SIGN antibody [UW60.1] (APC)

Package: 50 tests

Store at: 4°C

Summary

Product Description	APC-conjugated Mouse Monoclonal antibody [UW60.1] recognizes CD209 / DC-SIGN
Tested Reactivity	Hu
Tested Application	FACS
Specificity	The mouse monoclonal antibody UW60.1 recognizes an extracellular epitope of human CD209 (DC-SIGN), a 44 kDa transmembrane receptor, expressed on the surface of dendritic cells and macrophages.
Host	Mouse
Clonality	Monoclonal
Clone	UW60.1
Isotype	IgG2a
Target Name	CD209 / DC-SIGN
Species	Human
Immunogen	CD209-His-tagged fusion protein.
Conjugation	APC
Alternate Names	CDSIGN; Dendritic cell-specific ICAM-3-grabbing non-integrin 1; CLEC4L; DC-SIGN; CD antigen CD209; CD209 antigen; DC-SIGN1; C-type lectin domain family 4 member L

Application Instructions

Application table	<table><thead><tr><th>Application</th><th>Dilution</th></tr></thead><tbody><tr><td>FACS</td><td>10 µl / 100 µl of whole blood or 10⁶ cells</td></tr></tbody></table>	Application	Dilution	FACS	10 µl / 100 µl of whole blood or 10 ⁶ cells
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FACS	10 µl / 100 µl of whole blood or 10 ⁶ cells				
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.				

Properties

Form	Liquid
Purification	Purified
Buffer	PBS and 15 mM Sodium azide.
Preservative	15 mM Sodium azide
Storage instruction	Aliquot and store in the dark at 2-8°C. Keep protected from prolonged exposure to light. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Gene Symbol CD209

Gene Full Name CD209 molecule

Background

This gene encodes a transmembrane receptor and is often referred to as DC-SIGN because of its expression on the surface of dendritic cells and macrophages. The encoded protein is involved in the innate immune system and recognizes numerous evolutionarily divergent pathogens ranging from parasites to viruses with a large impact on public health. The protein is organized into three distinct domains: an N-terminal transmembrane domain, a tandem-repeat neck domain and C-type lectin carbohydrate recognition domain. The extracellular region consisting of the C-type lectin and neck domains has a dual function as a pathogen recognition receptor and a cell adhesion receptor by binding carbohydrate ligands on the surface of microbes and endogenous cells. The neck region is important for homo-oligomerization which allows the receptor to bind multivalent ligands with high avidity. Variations in the number of 23 amino acid repeats in the neck domain of this protein are rare but have a significant impact on ligand binding ability. This gene is closely related in terms of both sequence and function to a neighboring gene (GeneID 10332; often referred to as L-SIGN). DC-SIGN and L-SIGN differ in their ligand-binding properties and distribution. Alternative splicing results in multiple variants. [provided by RefSeq, Feb 2009]

Function

Pathogen-recognition receptor expressed on the surface of immature dendritic cells (DCs) and involved in initiation of primary immune response. Thought to mediate the endocytosis of pathogens which are subsequently degraded in lysosomal compartments. The receptor returns to the cell membrane surface and the pathogen-derived antigens are presented to resting T-cells via MHC class II proteins to initiate the adaptive immune response.

On DCs it is a high affinity receptor for ICAM2 and ICAM3 by binding to mannose-like carbohydrates. May act as a DC rolling receptor that mediates transendothelial migration of DC precursors from blood to tissues by binding endothelial ICAM2. Seems to regulate DC-induced T-cell proliferation by binding to ICAM3 on T-cells in the immunological synapse formed between DC and T-cells.

(Microbial infection) Acts as an attachment receptor for HIV-1 and HIV-2.

(Microbial infection) Acts as an attachment receptor for Ebolavirus.

(Microbial infection) Acts as an attachment receptor for Cytomegalovirus.

(Microbial infection) Acts as an attachment receptor for HCV.

(Microbial infection) Acts as an attachment receptor for Dengue virus.

(Microbial infection) Acts as an attachment receptor for Measles virus.

(Microbial infection) Acts as an attachment receptor for Herpes simplex virus 1.

(Microbial infection) Acts as an attachment receptor for Influenzavirus A.

(Microbial infection) Acts as an attachment receptor for SARS coronavirus.

(Microbial infection) Acts as an attachment receptor for Japanese encephalitis virus.

(Microbial infection) Acts as an attachment receptor for Lassa virus (PubMed:23966408). Acts as an attachment receptor for Marburg virusn.

(Microbial infection) Acts as an attachment receptor for Respiratory syncytial virus.

(Microbial infection) Acts as an attachment receptor for Rift valley fever virus and uukuniemi virus.

(Microbial infection) Acts as an attachment receptor for West-nile virus.

(Microbial infection) Probably recognizes in a calcium-dependent manner high mannose N-linked oligosaccharides in a variety of bacterial pathogen antigens, including Leishmania pifanoi LPG, Lewis-x antigen in Helicobacter pylori LPS, mannose in Klebsiella pneumoniae LPS, di-mannose and tri-mannose in Mycobacterium tuberculosis ManLAM and Lewis-x antigen in Schistosoma mansoni SEA (PubMed:16379498). Recognition of M.tuberculosis by dendritic cells occurs partially via this molecule (PubMed:16092920, PubMed:21203928). [UniProt]

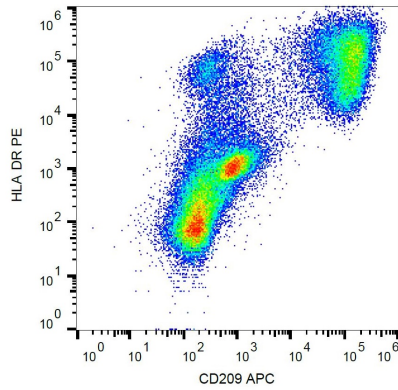
Calculated Mw

46 kDa

Cellular Localization

Isoform 1: Cell membrane; Single-pass type II membrane protein. Isoform 2: Cell membrane; Single-pass type II membrane protein. Isoform 3: Cell membrane; Single-pass type II membrane protein. Isoform 4: Cell membrane; Single-pass type II membrane protein. Isoform 5: Cell membrane; Single-pass type II membrane protein. Isoform 6: Secreted. Isoform 7: Secreted. Isoform 8: Secreted. Isoform 9: Secreted. Isoform 10: Secreted. Isoform 11: Secreted. Isoform 12: Secreted. [UniProt]

Images



ARG42251 anti-CD209 / DC-SIGN antibody [UW60.1] (APC) FACS image

Flow Cytometry: Human monocytes-derived dendritic cells stained with ARG42251 anti-CD209 / DC-SIGN antibody [UW60.1] (APC) and anti-HLA DR antibody (PE).